

**REMARKS**

Applicants respectfully request reconsideration and withdrawal of the rejections of the claims.

Claims 1-3 were rejected under 35 U.S.C. §102, on the grounds that they were considered to be anticipated by the *Kariya et al.* patent (U.S. 5,164,974), and claims 5-11 were rejected under 35 U.S.C. §103 as being unpatentable over the *Kariya et al.* patent. Claims 1, 2 and 4 were rejected under 35 U.S.C. §102 on the basis of the *Otto et al.* publication, and claims 5-11 were rejected under 35 U.S.C. §103 as being unpatentable over the *Otto* publication. Claims 16-19 were rejected under 35 U.S.C. §103 as being unpatentable over the *Fujinawa et al.* patent (U.S. 6,266,392). In addition, claims 12-20 and 22 were rejected under 35 U.S.C. §103 as being unpatentable over the *Otto* publication in view of the *Fujinawa* patent, and claims 16-21 were rejected as being unpatentable over the *Wilkins* patent (U.S. 5,016,267) in view of the *Fujinawa* patent.

To further clarify the distinctions between the subject matter of the present invention and the prior art represented by these references, claim 1 now recites a solar slit device for collimating high energy X-rays that comprises a plurality of substantially parallel blades constructed from glass sheets each having a thickness less than 250  $\mu\text{m}$ , and whose surfaces have a non-reflective treatment to absorb divergent X-rays. It is respectfully submitted that the cited references do not suggest this claimed subject matter, whether considered individually or in combination.

First, it is to be noted that claims 1 and 16 now recite that the blades are constructed from glass, which was previously recited in claim 3. Since claim 3 was

not rejected on the basis of the *Otto* publication, it is respectfully submitted that all rejections based upon that publication have been rendered moot.

The *Kariya* patent was cited for its disclosure of solar slits made from glass plates. This patent discloses a collimating system for *soft* X-rays, i.e., X-rays having an energy level less than 4 KeV (col. 2, lines 19-24). In contrast, the present invention is directed to the collimation of high energy X-rays, i.e., X-rays with an energy level greater than 8 KeV. Glass is known to be a highly absorbent material for low-energy, or soft, X-rays. However, for high energy X-rays, its inherent absorbency is relatively low. The *Kariya* patent does not suggest that such a low-absorbing material can be used for solar slits to provide high transmission efficiency and high angular resolution with high-energy X-rays.

In accordance with the claimed invention, however, such results can be achieved by providing a non-reflective treatment on the surfaces of the thin glass sheets. In accordance with one aspect of the invention, the sheets are provided with a non-reflective coating, such as barium sulfate. In another aspect of the invention, the surfaces of the sheets are etched to prevent reflection.

In connection with this feature of the invention, the Office Action relies upon the *Fujinawa* patent. In contrast to the claimed invention, however, that patent does not disclose the application of a non-reflective treatment to the surface of thin glass sheets. Rather, it discloses oxidation and sintering processes that are applied to metal foils. There is no disclosure pertaining to the treatment of the surfaces of glass plates.

It is respectfully submitted that none of the references of record disclose, nor otherwise suggest, a solar slit device that is comprised of a plurality of thin glass

sheets whose surfaces have a non-reflective treatment, to absorb divergent high-energy X-rays. Furthermore, none of them disclose that such a treatment can comprise a coating of barium sulfate, as recited in claims 14 and 29, or etching of the surface, as recited in claims 15 and 30.

Furthermore, while the *Kariya* patent discloses the use of glass plates, it does not disclose the use of thin glass plates for the efficient transmission of high-energy X-rays. In particular, it does not disclose that the plates should have a thickness less than 250  $\mu\text{m}$ , and more particularly less than 70  $\mu\text{m}$  (as recited in claims 10 and 26), or approximately 50  $\mu\text{m}$  (as recited in claims 11 and 27). Rather, it only discloses that the glass plates should be on the order of a millimeter, for use in connection with the collimation of soft X-rays.

For the foregoing reasons, it is respectfully submitted that the currently pending claims are patentably distinct from the references of record.

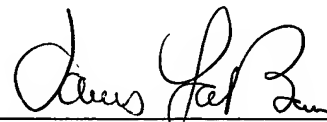
Reconsideration and withdrawal of the rejections are therefore respectfully requested.

Respectfully submitted,

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